Environmental Update from Ukraine

Bucharest
May 2004

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SPHERE GROUP

Novyj Svet, Crimea. The Pine tree.
Photo: Oleg Baranovsky.

Briefing Topics

- Background on Ukraine's Environmental policies and programs
- Current Ministry of Defense projects and plans
- Major environmental issues
- MOD water cleanup projects in Ukraine
- Future events
- Future goals

St Andrews cathedral on Kiev's historic Andriyivsky Uzviz. Empress Elizaveta Petrivna laid the foundation in 1744.

Background: Military Environmental Programs and Policies in Ukraine

A sleepy lion “guards” Alupta Palace, Crimea.

- Before 2000 there was no ***systematic*** approach to military environmental issues
- Ukraine had neither governmental nor MoD ***programs*** for such operations
- Environmental restoration typically began only after an emergency…

Background: Military Environmental Programs and Policies in Ukraine

Not so sleepy.

- Since independence Ukraine has become a more open and democratic society
- The result – environmental awareness
- And growing demand for active environmental remediation and restoration.

Ukrainian Environmental Awareness

Grrrr!

Alupta Palace is a jewel of Ukraine, on Crimea's Black Sea coast.

In today's Ukraine there is growing demand for active environmental remediation and restoration.

Cold War Legacy: widespread contamination

Fuel storage tanks -- the now closed strategic bomber base at Uzyn, Ukraine

The Bad Old Days in Ukraine

- Hundreds of military bases and facilities
- Many air bases with heavy contamination from fuel and heavy metals
- Bases were secret, closed facilities
- No environmental oversight or regulation

Ukraine’s key Cold War legacy sites

The US-Ukraine Threat Reduction Program

- Ukraine **cooperated with the United States** to eliminate nuclear weapons and strategic delivery systems
- Today Ukraine has no nuclear weapons and no systems (bombers, missiles) capable of delivering them
- The US Defense Threat Reduction Agency recently completed this program:
  - surveys of military facilities
  - development of state programs
  - nuclear weapon elimination (warheads to US-RU facility)
  - strategic airfield elimination
  - (some) missile fuel elimination (but much remains)
- Destruction of missile silos and Ukraine's bomber fleet
- **No associated environmental remediation ("clean-up")**

Ministry of Defense Program

Abandoned fuel facility at Uzyn, Ukraine

- In 2000-2001 the Ministry of Defense of Ukraine developed a program for rehabilitation of sites contaminated by military operations
- Program is to run 2002-2015
- Cabinet of Ministers of Ukraine approved this program (Decree 916 dated 26 July 2001)

GOAL: Ensure a scientifically-based approach to the remediation of military site contamination in Ukraine.

Ministry of Defense pilot project

The MOD program began in 2002 with surveys of these sites:

- **Airfield** (Dubno, Rovenska oblast)
- **Missile silo CC-4** (Velyky Dyvlyn Zhytomirska oblast)
- **Missile fuel storage site** (Shevchenkovo, Kharkovska oblast)
- **POL storage site** (Kiev)
- **Artillery live fire range** (Divichki, Kievska oblast)

Central Kiev – restored building near Golden Gate

Fuel contamination of groundwater

- Significant fuel issues at now-closed airbases at **Uzin, Priluki, Bela Tserkva, Lutsk, Poltava, Mirgorod, Melitopol**
- “Product recovery” possible in many cases
- Preliminary environmental surveys financed through commercial (private) sources with the right of selling recovered fuel product
- Government lost control over the quality of environmental cleanup because of “money interest”
- Ministries of Defense and Environment lack funding for serious groundwater cleanup

Ministry of Defense Facility Types:

1. Airfields
2. Missile silos
3. Missile fuel storage sites
4. Petroleum-Oil-Lubricants (POL) storage sites
5. Range facilities
6. Radioactive waste disposal sites
7. Ammunition depots

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Big Bang Theory

Army depot blaze in Ukraine kills five

16:44 2004-05-07

The fire ravaging artillery depots at a military base in southeastern Ukraine since yesterday has killed at least five people, the Ukrainian Emergencies Ministry reports. Firefighter brigades and rescue teams still cannot approach the scene, with ammunition fragments being scattered around violently.

The Ukrainian Defense Minister, Yevgeny Marchuk, could not say when the blaze was likely to be extinguished. "When this will be possible to do remains unclear," he said in a telephone interview for the national television network Inter. At this point, it is impossible to reach the scene without putting people at risk, he explained. Teams with special protective gear have now been called for from Kharkiv, Krivoy Rog, and other Ukrainian cities, he said.

The ammunition fragments are being scattered within the radius of 10 to 40 kilometers from the epicenter. The nearest village is only five kilometers away. Eleven communities have found themselves in the dangerous zone. Five thousand of the local inhabitants have reportedly been evacuated and provided with temporary lodgings and medical aid.

• Thursday 6 May 6, 2004: fire at the ammunition depot of Southern Operation Command near the Phedorovka railway station of Melitopol district of Zaporozhye region.

• The depot contained artillery ammunition of all types in used by Ukraine Armed Forces

• Nearly 10,000 residents of four neighbouring villages were evacuated

• Oil storage caught fire. - Gas pipeline damaged.

• Radius of fragment dispersion up to 70 km

• Zaporozhskaya atomic power station at Energograd is 40 km from the explosion epicentre

• The Chief of Joint Staff of Armed Forces Alexander Zatinayko apologised to citizens

A BM-21 “Grad” rocket landed next to a main highway

“Grad” rockets in action as they were intended.

Major Russian Highway Sealed Off After Arms Depot Explosion

MosNews

A major highway connecting Moscow and the Ukrainian city of Simferopol was closed after explosions tore through an arms depot in south Ukraine on Thursday, sending ammunition and shrapnel flying across a 10-km (six-mile) radius and prompting the evacuation of nearly 10,000 residents, Russian media reported.

“A fire broke out at Defense Ministry warehouses near Novobohdanivka village, where large amounts of ammunition were stored. The ammunition then detonated,” ministry spokesman Oleh Oleksandriv told Reuters.

Reuters quoted Oleksandriv as saying that metal shards had been catapulted over a 10-km radius and hundreds of firefighters were trying to bring the blaze under control. The ministry and local authorities evacuated 9,700 people from 15 villages.

According to Reuters, reporters in the region said they had been halted about 20 km from the site of the accident, but could hear a succession of blasts and saw large plumes of black smoke.

• Vera Bobkova is evacuated from Spasskoye village in Melitopol district of Zaporozhye region.

• Larisa Volovich, Valrntina Syedina and Irina Lubishko share their feelings on Friday, May 7, 2004 in the village of Terpenie after being evacuated from Spasskoye.

• Even armoured troop-carriers can’t approach the depots where shells of the “Uragan” and “Zmerch” class are detonating now.

• 5,725 persons were evacuated, 800 residents were removed from the 4 villages of Mikhaylovskiy district in the danger zone.
•Neighbours try to find their cattle, feed them and to milk cows.
Photo by Olga Chekanova / UNIAN

DONETSK, May 8 (Itar-Tass) -- A heavy rain has helped localise the fire at arms depots in the Zaporozhye region, Ukraine, and reduced the threat of new ordnance explosions.

It has been raining for the second day in the row in the area. The downpour has prevented the fire from spreading to the depots where projectiles are stored.

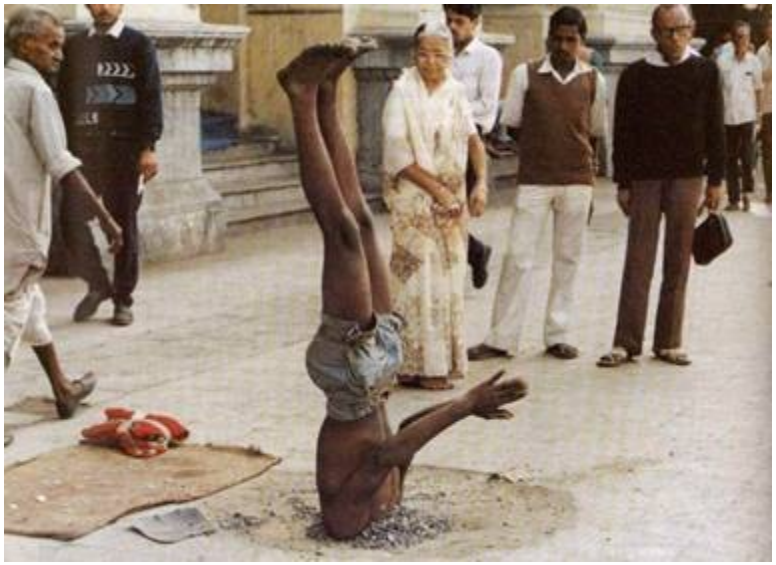
“The fire is abating,” Vice-Prime Minister Andrei Klyuyev told a press conference in Melitopol on Friday.

He denied rumours about massive damage caused by the explosions at the arms depot.

“There are no and could be no chemical, nuclear, explosive substances or ammonia in the depots,” he said.

“Only combat ordnance with gunpowder charges were stored at the depots,” Klyuyev said.

“The situation is under control and it seems that the fire is abating. There are already signs of slow fire. Explosions have become less frequent. **While last evening they occurred every four to five seconds, by Friday evening there were no more than 18 explosions per minute,” he said.**



“Everything has been stored in huge heaps like beets”

Yevhen Marchuk,
Ukrainian Defence Minister

- At the height of the blaze, which started on Thursday, there were 5,000 blasts an hour.
- The explosions sprayed debris and shells many kilometres away from the arms dump in south eastern Ukraine.
- Mr Marchuk said the ammunition store, which caught fire near Melitopol in the Zaporizhzhya region, was loaded beyond capacity with mines, rockets, grenades and cartridges as well as "quite serious missiles and quite dangerous pieces of munitions there".
- "It's hard to imagine the nightmare of hundreds and hundreds of thousands of shells (lying around) in the grass and in the bushes for decades," he said.
- "No-one has dared approach them as everything has long been rotten. Everything has been stored in huge heaps like beets."

MOD Environmental Program Goals

Black Sea panorama -- Yalta

1. Improve capabilities for ***site assessement and survey***
2. Develop and test a ***standard system*** of environmental assessment that can be applied at other facilities throughout Ukraine
3. Develop and conduct site remediation and restoration **projects**

Program Challenges

1. **Legislation** - no national standards
2. **Bureaucracy** – excessive oversight by multiple agencies reduces effectiveness of environmental operations
3. **Irregular financing** – delays due to lack of funds means data gathered during surveys loses value

   2002-2003 allocated $380,000 instead of planned $1,4 mln

   For 2004 there is no financing foreseen

   Financing for 2005 is under consideration

4. **Technical resources** – no opportunity to introduce new technologies – agencies forced to rely on obsolete equipment

Livadia Palace, Yalta

Ukraine’s Future Goals

- Environmental standards for cleanup operations
- Legal codes and standards for environmental regulation
- Improved environmental survey and assessment methods
- Modern risk evaluation and rehabilitation techniques
- Budgetary support for new technologies, techniques
- Support by a wide range of national and foreign organizations that can offer financial and technical support
- Support for the 2005 Environment Engineering Conference

Main conference room at Livadia Palace, Yalta, where the Big Three met in 1945.

The Big Three at Yalta

The "Big Three" sit in the courtyard of Yalta's Livadia Palace: Prime Minister Winston S. Churchill, President Franklin D. Roosevelt, and Premier Josef Stalin. February 1945. *National Archives and Records Administration*

Courtyard at Livadia Palace today

Questions?

Fountain café-park by
Kiev’s Golden Gate

Kiev -- Independence Square by night

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